

ABSTRACT OF THE DISCLOSURE

The present invention demonstrates that glucocorticoid-induced bone disease is due to changes in the birth and death rate of bone cells using a murine model of glucocorticoid excess as well as bone biopsy specimens obtained from patients with glucocorticoid-induced osteoporosis. This invention demonstrates that glucocorticoid administration increases apoptosis of mature osteoblasts and osteocytes and decreases bone formation rate and bone mineral density accompanied by defective osteoblastogenesis and osteoclastogenesis in the bone marrow.